

Applicant presents this Preliminary Amendment in conjunction with a Request by Applicant for Interference Pursuant to 37 C.F.R. § 1.604 wherein Applicant respectfully requests that an interference be declared between this divisional application and the United States counterpart to co-pending patent application PCT/US99/03807. The information required by 37 C.F.R. § 1.604(a) is set forth below under sections that should facilitate consideration by the Examiner.

## **I. IDENTIFICATION OF THE PATENT APPLICATION THAT INCLUDES SUBJECT MATTER WHICH INTERFERES WITH THE PRESENT APPLICATION**

The patent application that claims subject matter which interferes with subject matter claimed herein is believed to be the United States counterpart patent application to published PCT International Publication Number WO 99/42813 entitled "METHOD AND APPARATUS FOR SYNTHESIS OF ARRAYS OF DNA PROBES." The WO 99/42813 application was published on August 26, 1999, which purports on its face to be based on United States provisional patent application 60/075,641 filed February 23, 1998. Wisconsin Alumni Research Foundation is the assignee named on the face of the published application. The United States is not designated on the face of the publication, as such, Applicant believes that a counterpart United States patent application was filed concurrently with the filing of the published application, which is the patent application that interferes with the present application.

## **II. PRESENTATION OF A PROPOSED COUNT**

Attached Appendix A sets forth the proposed count. The proposed phantom count is claim 1 of the '526 application, and was selected after consideration of the subject matter claimed by the respective parties.

The proposed count is at least as broad as claim 1 in the WO 99/42813 application. A phantom count is proposed because different language is used by the respective parties to describe the same invention.

### **III. IDENTIFICATION OF THE CLAIM OF WO 99/42813 THAT CORRESPONDS TO THE COUNT**

Claims 1-42 of the WO 99/42813 application, which Applicant believes corresponds to the claims of the United States counterpart, correspond to the proposed count. Appendix C is a comparison of claim 1 of the WO 99/42813 application and the proposed count.

### **IV. CLAIMS OF THE PRESENT APPLICATION THAT CORRESPOND TO THE PROPOSED COUNT**

Claims 39-60 of the present divisional application are believed to correspond to the proposed count. To assist the Examiner in this regard, Applicant includes Appendix B, C and D. Appendix B is a chart that provides an element-by-element recitation of the newly added claims of this application and an indication of the passages in the original application filed where, at the very least, the claims find support. Appendix D is a chart that provides a side-by-side comparison of allowed claim 15 of the '526 application with the proposed count.

### **V. CONCLUSION**

Applicant respectfully requests that an interference be declared employing the proposed count set forth in Appendix A with claims 39-60 of this divisional application and claims 1-42 of the United States counterpart of International Application Number WO 99/42813, and designated as corresponding to the proposed count. Such action is respectfully requested.

Should any fees under 37 C.F.R. §§ 1.16 to 1.18 be required for any reason relating to the enclosed materials, or should an overpayment be included herein, the Commissioner is authorized to deduct or credit said fees from or to Gardere & Wynne, L.L.P. Deposit Account

No. 07-0153. The Examiner is invited to telephone the undersigned at the telephone number listed below if he or she has any questions or suggested amendments to the claims.

Dated this 2nd day of February, 2001.

Respectfully submitted:



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Edwin S. Flores  
Attorney for Applicant  
Registration No. 38,453  
Gardere & Wynne, L.L.P.  
1601 Elm Street, Suite 3000  
Dallas, Texas 75201-4767  
(214) 999-3000 - Tel  
(214) 999-4667 - Fax

APPENDIX A

PROPOSED PHANTOM COUNT

- 1           1.     An apparatus for catalyzing a reaction on a substrate comprising:  
2                 a light source;  
3                 a micromirror positioned to redirect light from said light source toward said  
4     substrate;  
5                 a computer connected to, and controlling, said micromirror; and  
6                 a reaction chamber is placed in the path of light redirected by said micromirror,  
7     wherein light that is redirected by said micromirror catalyzes a chemical reaction proximate said  
8     substrate in said reaction chamber.

APPENDIX B

APPLICATION OF CLAIM 39 OF THIS DIVISIONAL APPLICATION TO THE  
DISCLOSURE OF THE '526 APPLICATION

<b>Claim 39 of this divisional application</b>	<b>Disclosure in this application. Pg. 5, ll. 7-12.</b>
Apparatus for use in synthesis of arrays of DNA probes, polypeptides, and the like, comprising:	The method may also comprise the steps of positioning a substrate with a reaction chamber, flooding the surface of the substrate with a light catalyzable reaction chemical, such as a nucleotide or amino acid residue, and exposing the chemicals reagents light. Pg. 7, ll. 4-9.
(a) a substrate with an active surface on which the arrays may be formed;	More particularly, the present invention can be an apparatus for catalyzing a reaction on a substrate comprising... Pg. 5, ll. 7-12.
(b) an image former providing a high precision, two-dimensional light image projected onto the substrate active surface, comprising:	a light source that is directed toward a micromirror positioned to redirect light... Pg. 5, ll. 7-12.
(1) a light source providing a light beam;	from the light source toward a substrate. Pg. 5, ll. 7-12.
(2) a micromirror device receiving the light beam from the source and formed of an array of electronically addressable micromirrors, each of which can be selectively tilted between one of at least two separate positions, wherein in one of the positions of each micromirror the light from the source incident upon the micromirror is deflected away from an optical axis and in a second of the at least two positions of the micromirror the light is reflected along the optical axis; and	A computer is connected to, and controls, the micromirror and a substrate holder, such as a reaction chamber, that is placed in the path of light redirected by the micromirror, wherein light that is redirected by the micromirror catalyzes a chemical reaction proximate the substrate. Pg. 5, ll. 7-12.
(3) projection optics receiving the light reflected from the micromirrors along the optical axis and imaging the pattern of the micromirrors onto the active surface of the substrate.	By proximate it is meant that the light catalyzed reaction can occur on or about the surface of the substrate. Pg. 5, ll. 7-12.

APPENDIX CCOMPARISON OF CLAIM 1 OF THE WO 99/42813 APPLICATION WITH THE  
PROPOSED COUNT

<b>Claim 1 WO 99/42813</b>	<b>PROPOSED COUNT</b>
Apparatus for use in synthesis of arrays of DNA probes, polypeptides, and the like, comprising:	An apparatus for catalyzing a reaction
(a) a substrate with an active surface on which the arrays may be formed;	on a substrate comprising:
(b) an image former providing a high precision, two-dimensional light image projected onto the substrate active surface, comprising:	a micromirror positioned to redirect light from said light source toward said substrate;
(1) a light source providing a light beam;	a light source;
(2) a micromirror device receiving the light beam from the source and formed of an array of electronically addressable micromirrors, each of which can be selectively tilted between one of at least two separate positions, wherein in one of the positions of each micromirror the light from the source incident upon the micromirror is deflected away from an optical axis and in a second of the at least two positions of the micromirror the light is reflected along the optical axis; and	a computer connected to, and controlling, said micromirror; and
(3) projection optics receiving the light reflected from the micromirrors along the optical axis and imaging the pattern of the micromirrors onto the active surface of the substrate.	a reaction chamber is placed in the path of light redirected by said micromirror, wherein light that is redirected by said micromirror catalyzes a chemical reaction proximate said substrate in said reaction chamber.

APPENDIX DCOMPARISON OF ALLOWED CLAIM 15 OF THE '526 APPLICATION WITH THE PROPOSED COUNT

<b>Claim 15 of 09/326,526</b>	<b>PROPOSED COUNT</b>
Apparatus for use in synthesis of arrays of DNA probes, polypeptides, and the like, comprising:	An apparatus for catalyzing a reaction
(a) a substrate with an active surface on which the arrays may be formed;	on a substrate comprising:
(b) an image former providing a high precision, two-dimensional light image projected onto the substrate active surface, comprising:	a micromirror positioned to redirect light from said light source toward said substrate;
(1) a light source providing a light beam;	a light source;
(2) a micromirror device receiving the light beam from the source and formed of an array of electronically addressable micromirrors, each of which can be selectively tilted between one of at least two separate positions, wherein in one of the positions of each micromirror the light from the source incident upon the micromirror is deflected away from an optical axis and in a second of the at least two positions of the micromirror the light is reflected along the optical axis; and	a computer connected to, and controlling, said micromirror; and
(3) projection optics receiving the light reflected from the micromirrors along the optical axis and imaging the pattern of the micromirrors onto the active surface of the substrate.	a reaction chamber is placed in the path of light redirected by said micromirror, wherein light that is redirected by said micromirror catalyzes a chemical reaction proximate said substrate in said reaction chamber.